



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,099	10/05/2004	Yefim Riskin	P-7257-US	5091
27130	7590	09/20/2005	EXAMINER	
EITAN, PEARL, LATZER & COHEN ZEDEK LLP 10 ROCKEFELLER PLAZA, SUITE 1001 NEW YORK, NY 10020			KITOV, ZEEV	
			ART UNIT	PAPER NUMBER
			2836	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/510,099	RISKIN, YEFIM	
	<b>Examiner</b>	<b>Art Unit</b>	
	Zeev Kitov	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 - 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 8, 10 - 14 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 October 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Warning*

Applicant is advised that should claim 13 be found allowable, claim 14 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Applicant is advised that should claim 3 be found allowable, claim 5 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Applicant is advised that should claim 4 be found allowable, claim 6 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof (in a case that claim 5 is withdrawn). When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Art Unit: 2836

Applicant is advised that should claim 10 be found allowable, claim 11 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### ***Objection***

Claims 1 – 14 are objected to due to spelling errors. The claims seem to be a direct translation from the foreign language without proper editing. Appropriate corrections are required.

Claim 7 is objected to due to a missing word in the sentence: “an output from the ac high voltage being via the balancing unit to the electrodes”.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 13 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A reason for that is in following Claims limitations: “A method of generating positive and negative ions substantially as described in the aforementioned specification and accompanying drawings”.

A meaning of the word "substantially" is not clear. So a presence of this word alone makes the Claims indefinite.

2. Claims 13 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim. A method of generating positive and negative ions taken alone without the rest of the sentence can be examined. However, the reference made in the claim to the Specification and Drawings assumes that the content of the Specification and the Drawings being imported into the Claims. This is contrary to the USPTO practice based on MPEP rules.

As stated in the Court Decision, *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993), "Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims".

Therefore the Claims 13 and 14 in present form cannot be examined.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pitel et al. (US 6,259,591) in view of Geffer et al. (US 6,850,403). Regarding Claims 1

Art Unit: 2836

and 7, Pitel et al. disclose following element of the Claim: ac high voltage generator (60 and 62 in Fig. 3); one pair of ionizing electrodes provided with different polarity from the AC high-voltage generator (47 and 49 in Fig. 2), and an element for producing (106a and 106b in Fig. 2) a voltage drop connected to each of the cages for generating an external electric field by using the ion current from each electrode, passing through the element for producing a voltage drop. However, it does not disclose the electrodes mounted in separate cages and balancing unit. Gefter et al. disclose the electrodes (7 and 8 in Fig. 1) mounted in separate conducting cages (the upper and bottom spaces separated by element 11 in Fig. 1) located adjacent to each other, each of the cages provided with an opening opposite the electrode. It further discloses a balancing unit for balancing ion currents emitted by each of the electrodes (see Fig. 6, col. 5, lines 10 – 26).

The ions flowing in the gap between the front edge of the insulation (11 in Fig. 1) and the grid (12 in Fig. 1) are inherently influenced by the field formed between each one of two electrodes (8 and 9 in Fig. 1) carrying positive and negative high voltages and the grid (12 in Fig. 1) having a potential of few volts. The grid provides an additional help to maintain a balance of positive and negative ions having different mobility (col. 3, lines 11 – 56) by changing a value of the bias voltage (col. 5, lines 27 – 39), by attracting the ions of one polarity and repelling some of the ions of another polarity. The repelled ions lose their speed and become a target of attraction forces from another electrode having opposite polarity. Therefore, some of the ions escape outside the cages and move to the opposite electrode due to the presence of electric field between

Art Unit: 2836

the electrodes. Both references have the same problem solving area, namely providing bipolar air ionizers. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Pitel et al. solution by adding the balancing mechanisms according to Gefter et al., because as Gefter et al. state (col. 3, lines 11 – 56), to maintain electrically neutral flow of ions, separate electrodes in different cages and balancing mechanisms are to be used.

Regarding Claim 2, Pitel et al. disclose the ion currents from both electrodes passing through capacitive network common for these currents (106a and 106b in Fig. 2).

Regarding Claims 3, 5, 10 and 11, Gefter et al. disclose at least one of the ion currents emitted through the cage is used for providing a feedback signal for comparing the feedback signal with a reference signal to control the AC high-voltage generator, for stabilizing ion emission (see Fig. 6, col. 5, lines 10 – 26). A motivation for modification of the primary reference is the same as above.

Regarding Claims 4 and 6, Pitel et al. disclose an indicator for indicating the need for cleaning the electrodes from dust or repair (Clean signal in Fig. 4, col. 10, lines 26 – 29).

Regarding Claim 8, Pitel et al. disclose the ionizing electrodes (47 and 49 in Fig. 2) connected to different polarity terminals of the AC high-voltage generator (27 and 29 in Fig. 2); the high voltage is carried out by two inversely connected rectifying diodes (35 and 37 in Fig. 2).

Regarding Claim 12, Pitel et al. disclose an indicator for indicating the need for cleaning the electrodes from dust or repair (Clean signal in Fig. 4, col. 10, lines 26 – 29).

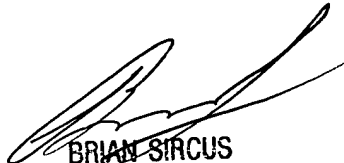
***Allowable Subject Matter***

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeev Kitov whose current telephone number is (571) 272 - 2052. The examiner can normally be reached on 8:00 – 4:30. If attempts to reach examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571) 272 – 2800, Ext. 36. The fax phone number for organization where this application or proceedings is assigned is (571) 273-8300 for all communications.

Z.K.  
09/15/2005

  
BRIAN SIRCUS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800